DOCUMENT RESUME

ED 443 376 HE 033 141

AUTHOR	Keller-Wolff, Christine; Eason, Becky; Hinds, Michele
TITLE	From the Students' Perspective: The Effect of College Courses.
PUB DATE	2000-04-00
NOTE	37p.; Paper presented at the Annual Meeting of the American Educational Research Association (New Orleans, LA, April 24-28, 2000).
PUB TYPE	Reports - Research (143) -- Speeches/Meeting Papers (150)
EDRS PRICE	MF01/PC02 Plus Postage.
DESCRIPTORS	College Seniors; College Students; *Discourse Analysis; Educational Benefits; Higher Education; *Outcomes of Education; Relevance (Education); *Student Development; *Student Educational Objectives; *Student Experience; Student Surveys
IDENTIFIERS	University of Kansas

ABSTRACT

This monograph offers a view into how students at one university regard their undergraduate education. The study is based on essays written by college seniors as part of a comprehensive assessment of general education at the University of Kansas. A sample of students completed a self-assessment, were interviewed by faculty, and were asked to compose a short essay that described the college courses they believed had the greatest impact on them. Eleven disciplines participated in the study over a three-year period. Content analysis grouped responses into the following categories: faculty influences (interactions with students, instructional strategies), development of professional knowledge and skills, development of life skills and expanded perspectives, and discovery of self/new ways of thinking about self. The study found that many of the reasons cited by students fit well with commonly held views of teaching and learning; some noted good teaching, others cited engaging subject matter, some preferred practical career preparation, and still others valued a broader world view. The essays also challenged some prevailing notions about teaching and learning; more comments than were expected cited increases in general life knowledge and skills. Students were also affected by courses that taught them to value their culture and history. (Contains 23 references.) (CH)

Reproductions supplied by EDRS are the best that can be made
from the original document.

ED 443 376

From the Students' Perspective: The Effect of College Courses

Christine Keller-Wolff
University of Kansas

Becky Eason
University of Kansas

Michele Hinds
Avila College

AERA Conference Presentation
April 24-28, 2000
New Orleans, LA

BEST COPY AVAILABLE

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY

C KELLER-WOLFF

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

- This document has been reproduced as received from the person or organization originating it.
- ☐ Minor changes have been made to improve reproduction quality.
- Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

HE 033 491

What is the effect of curriculum on students? Why do students select particular courses as having a significant impact on their lives? When students at the University of Kansas were asked to chose three classes from their coursework with the most impact on their lives, the explanations provided were insightful, disconcerting, moving, and often contradictory.

> *It upsets me to think that only three instructors motivated me enough to achieve above and beyond the norm in the four years at Kansas University, but I strongly believe that instructors and not necessarily the class material are the cornerstone to building a superior education. (Pharmacy student)*
>
> *This class specifically pertained to my major so, this is one class I benefited from. This is why it had an impact as it is one of only a few classes I took that will actually help prepare myself for my career. (Education student)*
>
> *They've always said seeing is believing. To believe what we learned in class, we have to see it applied outside of class as well. Therefore in deciding which three classes at KU that have had the most impact on me, I evaluated the classes where more than daily reading assignments, papers, and tests determined a grade. (Journalism student)*
>
> *I believe that the overall impact of this class was that I learned that knowledge is many-sided... Although this lesson is very general (it is not particular to child psychology) I feel that this lesson is the lesson in this class that will have the greatest impact on me in the long run and also that will most greatly influence my future. (Engineering student)*
>
> *Art history ... has a profound impact on my education and it will continue to influence my future by helping me recognize the importance of broadening my education. (Natural/Physical Science student)*
>
> *The common denominator of these courses was the freedom they allowed me to think and explore ideas. (Architecture student)*
>
> *At the time I was in dire need to take a class where I was not the only minority. This class was a refuge to me. . . . This class taught me that no matter where I am, there is always some place where I can find shelter. (Business student)*

The research literature's answer to the question of curricular impact on students is extensive and varied (i.e. Pascarella & Terenzini, 1998; Stark & Lattuca, 1997; Astin, 1993; Cross, 1981). Despite the seemingly comprehensive study of curriculum and its affect on students, the student perspective is largely absent from this literature. As Twombly (1992) noted in her study of student perspectives on general education, "The meaning students attach to curriculum is a sadly neglected area of study" (p. 238). When scholars do not take into account

student perspectives on effective curriculum, misperceptions are likely. For example, Stark & Lattuca (1997) point out the differences between student and faculty goals for curriculum – students view achieving vocational goals as a very important part of their education, while faculty believe vocational goals are quite unimportant. Some research suggests that, in the student's view, the impact of a college course may be less about the subject matter and more about the student's interactions with the teacher (Carson, 1996).

Carson (1996) asked alumni from one college to compose stories about their memories of their most effective professors. In reflecting on the results, she noted, "...I am troubled by what has sometimes been the focus of academic assessment today. Recognizing the contribution of assessment at its best, I yet worry about the tendency to easy reductionism, to a quantification that cannot possibly capture the complex and ambiguous -- but lasting -- education reflected in these students' memories of their college experiences" (p. 17). Indeed, Banta (1997), a recognized expert in educational assessment, believes that "insufficient involvement of students" is often a barrier to conducting successful assessments (p. 90). Another reason for more actively seeking the student perspective is the increasing diversity of the undergraduate population. Pascarella & Terenzini (1998) believe that higher education scholars may have an overly narrow view of the impact of a college education on students. A changing student body may necessitate further exploration of what makes a college education meaningful to students.

As higher education moves from a paradigm that emphasizes teaching to one that emphasizes learning (Barr & Tagg, 1995), the lack of student voice in assessing the impact of curriculum is even more conspicuous. Pedagogical practices are no longer based on the model of student as "empty vessels" to be filled with faculty's expert knowledge, but increasingly include students as collaborators with faculty in the production and creation of knowledge (i.e. Karney, 1997; Belenky, et al. 1995; Barr & Tagg, 1995; Bruffee, 1993). The influence of feminist pedagogy and adult education theory have encouraged many educators to question the notion of absolute faculty authority and knowledge in the classroom, and to recognize that student experiences are valuable and should be linked with class material to enhance student learning (i.e. Bruffee, 1993; Butler, 1995; Weiler, 1995; Knowles, 1984; Cross, 1981).

In the early 1980's, Cross and Angelo pioneered classroom assessment techniques commonly used to assess learner attitudes, values, and self awareness and learner's reaction to

instruction in a particular classroom (Angelo, 1994). Faculty members report that using such techniques often fundamentally changed their thinking and significantly improved students' learning (Stark & Lattuca, 1997). Stark and Lattuca (1997) recommend these techniques be used by faculty on a program or on an institutional level to take the "academic pulse" of students so that problems could be identified and corrected (p. 289). The problem with many student assessment techniques is that students respond to pre-determined questions based on what faculty or administrators feel is important to student learning, not through more open-ended, student-driven techniques.

Richard Light, director of the Harvard Assessment Seminars, emphasizes the importance of listening to what students say about their learning experiences: "Students have thought a lot about what works well for them. We can learn much from their insights. Often their insights are far more helpful, and more subtle, than a vague 'common wisdom' about how faculty members can help students to make good decisions at college" (1992, as cited in Twombly, 1992, p. 92-93). If students are to be considered partners in learning, their perspectives on the outcome of that learning are crucial.

To better understand the full complexity of the student perspective on the impact of curriculum in their lives, we examined essays written by college seniors that described the characteristics of college courses that they believed had the greatest impact on them.

Methodology

The analysis is based on essays written as a part of a comprehensive assessment of general education at the University of Kansas. Beginning in 1991, the assessment has been conducted annually to determine to what degree students graduating from the University have achieved a common set of general education goals. The assessment process has evolved since its inception based on feedback from participants. For example, in 1991, 1993, and 1995 samples of students from all academic units were included in the assessment. However, beginning in 1997, the sampling strategy was modified so that more students from each academic unit could be included. The academic units within the university rotated over a three-year cycle so that every three years, students from all units were surveyed. Accordingly, each spring a sample of approximately 30 student from three to four academic units: 1) completed a self assessment

survey focusing on their abilities to achieve the institutional goals, 2) participated in an interview with faculty, and 3) composed a one to three page essay. The essays responded to the following three questions:

> *Thinking back on all the classes you have taken at this University, what three have had the biggest impact on you? For each class: What kind of impact did it have? How do you see this course influencing you in your future life?*

For this study, essays from a three-year cycle – 1997, 1998, and 1999 – were examined. From this examination, the researchers hoped to gain a better understanding and a clearer insight into student perceptions regarding the affect of college classes on their lives. The approximately 310 essays were divided among eleven academic units: the Schools of Architecture, Business, Journalism, Social Welfare, Engineering, Education, Fine Arts, and Pharmacy, as well as the divisions of Humanities, Natural/Physical Sciences, and Social Sciences within the College of Liberal Arts and Sciences. One exception that emerged from the analysis was the positioning of the architectural engineering program. At the University of Kansas, architectural engineering is a joint program between the School of Architecture and the School of Engineering. The students from this program participated in the assessment process as part of the School of Architecture. However, analyses revealed that some, but not all, of the architectural engineering student essays had more in common with the engineering student essays than the with the architecture student essays. For analysis purposes, these students were kept as a separate, intact group and not included with the architecture students or the engineering students.

A qualitative, inductive approach to content analysis was used to allow categories, patterns, and themes to emerge from the data itself, rather than imposing a predetermined theoretical framework onto the data. Berg (1996) describes content analysis as "a passport to listening to the words of the text, and to understanding better the perspective(s) of the producer of these words" (p. 225). This view of content analysis is consistent with the underlying objective of this study – to listen to students' voices on how their college classes have affected their lives. To assure that the data would determine the categories and themes, an "open coding" process was used (Berg, 1996; Maxwell, 1996). "Open coding" involves breaking apart the data and rearranging it into as many categories as possible, each representing a different broad concept.

From a constructivist perspective, the researchers and the research object cannot be (and should not be) neatly separated (Guba & Lincoln as cited in Schwandt, 1994). Although grounded in higher education and methodology, we recognized that each of us would read the essays from unique vantage points, based on varied education and work experiences in business, English, and nursing. Each researcher took a portion of the essays and followed the "open coding" process, as described above, to generate themes from each set of essays. This preliminary coding facilitated the ability to consider the dimensions of each concept, their relationships with other concepts, and the conditions under which the concepts were pronounced or minimized (Strauss, 1987). Many of the categories overlapped or could be separated into subcategories under more general themes. Together, we engaged in an iterative, dialectical process to negotiate common ground among the general themes. Differences between the disciplines were noted and explored. Eventually, a consensus among the general themes was achieved and re-evaluated for fit with the data, as suggested by Guba & Lincoln (as cited in Schwandt, 1994).

Across the eleven disciplines that participated in the survey over three years, student responses could be grouped according to the following categories, which will be explored in greater detail throughout the remainder of the paper:

- Faculty Influences
- Development of Professional Knowledge and Skills
- Development of Knowledge and Skills for Life
- Discovery of Self/New Ways of Thinking about Self

This paper will rely heavily on student comments since the most effective way to demonstrate not only what students have to say about their education, but also how they choose to say it, is to quote the students verbatim.

Limitations of the Study

As described in the methodology, the essays used in this study were a part of an established assessment process. As with many secondary data sources, the researchers did not have control of the phrasing of the question, nor the context in which it was presented. Therefore, despite the intention to attend directly to student perspectives on the effect of certain courses, the researchers' ability to truly "get at" the students voices is limited both by the context and the question. For example, the question itself is likely to frame student responses.

Thinking back on all the classes you have taken at this University, what three have had the biggest impact on you? For each class: What kind of impact did it have? How do you see this course influencing you in your future life?

Asking students to consider how each class will "[influence] you in your future life" may have led students to discuss courses within their major that taught them *skills* that will prove useful in future careers. Further, by asking for "classes with the biggest impact," it is possible that students were more likely to mention positive experiences. Many students had difficulty separating the courses that had the greatest impact on them and the instructors that had the greatest impact on them. Some students acknowledged that although the subject matter was not that interesting or valuable, the instructors made the course a worthwhile experience. In this study, no distinction is made between whether the course or the instructor made the impact. In regard to context, students were instructed that the essays would be used as tool to initiate discussion in a faculty interview. As a result, students may have been less than open and honest in their responses.

We also attempted to utilize more quantitative methods of content analysis (Berg, 1995) to better discover any differences between academic fields. At first, we attempted to count the number of "general education" versus "major" courses that students felt influenced them. However, this proved difficult as major courses for some students, could have fulfilled general education courses for others (i.e. chemistry for natural/physical science majors versus chemistry for Journalism majors). More importantly, the reason a course had a significant impact on a particular student could not always be identified by a major or a general education designation. For example, an English literature class for an Education student could be valued because it directly influences how he/she will later teach, while for an Engineering student it could broaden

his/her perspective about other cultures. For these reasons, precise numerical comparisons between academic divisions and among categories are problematic.

Nevertheless, we believe that the choice of specific courses by students is an important area that should not be neglected. We are in the process of developing a new framework to focus on the individual courses mentioned in the essays. For instance, what courses are the most often mentioned? Are the most popular courses in a student's major, a general education course, or perhaps an introductory survey course? What level are the courses – freshman, sophomore, junior, senior? Are there some courses within major groups that appear in more than one cycle? What is the meaning of this reappearance? What courses are not mentioned in more than one cycle? At this time, general observations about category distributions among units is noted and discussed where appropriate. Despite these limitations, we believe that this analysis is able to provide new and fresh insights into the affect of college coursework on students.

Category One: Faculty Influences

Generally, students associated the courses they selected with the faculty who taught the course. In particular, students in the humanities tended to strongly emphasize instructor ownership of the class, e.g., Dr. Smith's *Human Peace and Conflict* course versus *the Human Peace and Conflict* course taught by Dr. Smith. Within this category, some students focused on the instructional methods used by faculty, while other comments noted the ways in which faculty related to the students and the subject matter, both inside and outside the classroom.

Faculty Interactions With Students

A theme of gratitude toward faculty members ran through many of the essays. Most essays identified at least one professor who made an indelible mark upon the writers – even if the student could no longer remember the faculty member's name.

> *I am ashamed to say have forgotten the instructor's name, but he is the one who brought awareness to my eyes. He encouraged me to realize that the things I am afraid of are not so different than the person's next to me, but worrying about these things is so stupid! He taught me how to give a speech in front of others, know about the subject and simply tell others about it. (Fine Arts student)*

While one student admitted to forgetting the professor's name, the students were clear about the reasons they were thankful. Often students believed that the professors in some way were responsible for the students' successful completion of their courses.

> *The [instructor] and the TA made all the difference. After going in to talk to him in his office, I realized it wasn't impossible for me to pass the class. The TA was also helpful... Without him, I never would have passed the class. (Pharmacy student)*

> *...because of the personal attention I received from my Professor, I did feel as if I had some sense of direction. (Natural/Physical Science student)*

> *My professor. . .pointed out my strengths and weaknesses in a way that helped me determine . . .my next step. (Fine Arts student)*

Keeping classes interesting earned the recognition of many students, who felt that such an atmosphere promoted student learning. Students praised faculty who were entertaining, indicating that when classes were entertaining students were more interested, and therefore learned more. Students also wrote about faculty who expressed dynamic interest in their subject. According to students, when faculty members were visibly interested in the material they were teaching, classes were more exciting and encouraged student learning.

> *[The professor] definitely has a talent few possess—the ability to teach while entertaining...Apart from just being a charming guy, [the professor] had the imagination to invent ways of explaining theory to a class mainly compromised of initially unreceptive non-majors hoping a film class about the 80s would be a fun blow-off. (Humanities major)*

> *The subject matter was wonderfully presented by three enthusiastic and knowledgeable professors...The use of different professors allowed each to teach within their own specialty; yet the course was still integrated into a coherent whole. (Pharmacy student)*

> *[the professor] has a teaching style that should be a benchmark for all teachers of art or architectural history...He was just so excited by the material that [size of the class] didn't matter, you heard what he said. (Fine Arts student)*

> *They would present the subject in an exciting manner. . . No matter what level of education of what class, classes should have some aspect to make them exciting. (Education student)*

> *We learned together in a fun atmosphere with interested professors who loved their jobs. What better way is there to learn? (Natural/Physical Science student)*

[the instructor] had a grand part in making this course as good as it was. He presented the material in a humorous and serious way when appropriate .... he truly cares about his students. (Journalism student)

This had an impact on me probably because the teacher made the class fun to attend. ...He presented the material in a way that related to the topic to our everyday lives. (Engineering student)

I felt that the professor was excellent as far as presenting the information and then allowing the students to interpret and react to it as they wished. I feel that she truly had compassion and expertise on the subject matter and showed this in her teaching. (Architecture student)

[the instructor] was the one teacher at KU who knows how to make a class truly entertaining. . .I don't think I learned as much as I did because of the content of the class, as much as I did because of the teaching. (Journalism student)

....these are the types of teachers that should be in the classroom. [the instructor] was funny, laid back, and cared about what was important to learn from a class like this. (Pharmacy student)

Beyond mere interest in the course material, some students identified faculty members who demonstrated a "passion" for what they taught. Student comments indicated that when a faculty member demonstrated such intense passion about the subject matter, the students became excited about the subject as well.

The professor was passionate about the subject, which made it easy to learn and made me realize that a Ph.D. in structural engineering is what I want. (Architectural Engineering student)

His passion for what he was teaching really comes out when he talks and it made the class captivating for me. I rarely missed and I remember most of what I learned.

Caring faculty members were also cited as memorable. Faculty who cared about the students as people or who cared that the students learned were mentioned in many essays. Students perceived that faculty who cared about the subject matter also seemed to care about the students.

[the instructor] is incredibly encouraging and positive as well.... He spoke with us about how important our education is and where it can take us if we want it to...I believe that most of [my decision to pursue an accounting career] is due to [the instructor's] efforts to get students thinking far into the future. He wanted us to see the big picture. (Business student)

He was intent on opening the eyes of his students and helping us work up to our potential. (Architecture student)

...the instructor displayed a genuine interest in making sure [the instructor's] students learned and understood. (Pharmacy student)

The teacher cared about our projects and our writing, and he encouraged me to enter an essay contest with one of my assignments. (Pharmacy student)

Finally, a teacher who cares and finally a subject I care about. The teacher is able to give the students real information about the material, able to motivate not push, and able to give the students knowledge they will be able to use. (Fine Arts student)

Instructional Strategies

Teaching strategies used within the classroom drew the attention of many students. Having "hands on" opportunities allowed the students to have experiences that made theory "real." Several of the classes that afforded students "hands on" experiences were science classes with laboratory sections. Other students mentioned courses in which the instructor routinely shared actual life experiences with the students. Other faculty were recognized for unique, unforgettable instructional strategies.

My teacher, [the instructor], was probably my most influential instructor. The class made a huge impact on me because of the exposure we had to real-life marketing experience. (Business student)

The instructor used overheads, movies, skits and other visual material to supplement his lectures. For instance, he showed a clip from the film Brazil to illustrate bureaucratic authority, a Charlie Chaplin movie captured Marx's theory that workers feel alienated from their jobs, and the documentary Roger and Me showed a harsh example of how scabs were treated. (Journalism student)

But the most enjoyable part of the class were the class discussions. The students wanted to come to class because the discussions were very interesting and the teacher was very good at helping us understand the meaning of the novels. (Engineering student)

Our professor has a student-centered teaching style. We do not sit through lectures where just one instructor speaks to us. Instead, we have discussions involving the entire class and our professor and his teaching assistants. (Social Sciences student)

I had never had a class that kept my whole attention, like this one did. [The instructor's] unique teaching style and approach to the subject matter was excellent. He integrated discussion, lecture and video to expose the class to a new way of thinking. (Journalism student)

[the professor's] experience working in the private sector and as a consultant on so many high profile projects helped immensely. He had the ability to hold the classes

BEST COPY AVAILABLE

> *attention and was not afraid to get off track and to discuss the issues that we wanted to talk about. He was masterful in bringing the conversation back around to the topic at hand and tying that into what most of us were doing in our other classes. (Fine Arts student)*

> *. . .Because the class was "hands on" and the instructor had such a diverse way of teaching the material, it kept the students very interested. Not only did I enjoy the class, but also I learned much more about differences in people than I would have learned with just a lecture course. (Pharmacy student)*

> *This [history] course earned my admiration by interspersing the tedious background timeline information with three extremely interesting biographies, effectively giving a realistic impression of specific moments in history through the lives of some important scientists. Humanitarian issues and conflicts were also made real. (Pharmacy student)*

Several students commented on class size and how the faculty handled the varying sizes. Most of the positive comments focused on the benefits of small classes, noting that faculty members could do more within a small class. Still, one faculty member made an attempt to get to know all of the students in his class of 1000.

> *. . .it was not the size of the class that made an impact on me, it was the professor. On a weekly basis [he] made himself available to us outside of class, offering review session and practice problems. . .He made an effort to get to know each student and assist him or her in any way that he could.. . He not only made learning fun and interesting, but he took the time to care , and helped me to achieve my goals. (Pharmacy student)*

> *The classes (Italian language) were great because they were small and my instructors were native Italians. (Natural/Physical Science student)*

Negative Comments

The majority of faculty comments were positive; however, there were students who included some of their memorable negative experiences with faculty. Perhaps not surprisingly, the majority of negative comments in the student essays overall fall into the category of "Faculty Influence." These comments were often couched between positive experiences in other courses, indicating that, for the most part, the student writing was not just airing a laundry list of grievances. Still some students were clearly disturbed by faculty, teaching assistants, or the course in general.

> *...the TA did not speak English very well, so from the first day of class I had a bad feeling. I had the hardest time following what he was saying when he lectured. (Natural/Physical Science student)*

The midterms were not written by the teacher, so this made it hard because the teacher did not emphasize some of the material that was important to know for the midterm. (Natural/Physical Science student)

This course ruined any appreciation I had for the sciences prior to my enrollment. Besides being too large to accommodate questions and clarification, this class was taught straight out of the book in an uninteresting and monotonous way. (Natural/Physical Science student)

. . .I found that it was the most inaccurate portrayal of what the Bible really is... .The professor often mocked Christian beliefs and tried to take the deity of Christ out of the Bible. (Fine Arts student)

My first disillusionment came when in the university calculus class we covered only four chapters taught by a TA. Bu the end of the class, I realized that I had learned more and covered more calculus material in the pre-calculus class taken in high school. (Fine Arts student)

Faculty attitude had a negative impact upon some students. Faculty who did not seem to care about their students, seemed resentful about teaching students who were not majors in the faculty's area, or faculty who were perceived as rude were cited. Some students noted that a negative faculty attitude created a poor learning environment.

. . .the professor communicated that he did not care, that he just wanted to be done with it. The realization it is too easy to pass, not take anything from it, and the professors don't really care one way or the other. (Fine Arts student)

I distinctly remember a teacher saying on the first day of class, "I don't know why they have the ARCE's taking this class because you don't need to know any of this material except for Chapter 10." This statement infuriated me because why should I be wasting my time learning a very difficult subject when non of the information learned will be applied in anything I do? I therefore did not apply myself since I felt there was no incentive to learn the material set before me. (Architectural Engineering student)

Although I found the subject to be interesting, the teacher was not. He was rude, impatient, and had no desire to help students or even be civil and friendly to them...In the four years here, I have found that the attitude and teaching style of the professor greatly affects the way I learn and apply myself. (Architectural Engineer student)

My teacher was very critical and not willing to help me learn or improve my drawing skills. (Engineering student)

A somewhat surprising theme that emerged from the critical comments was testing. Students were quite disappointed with courses whose curve did not reflect how poorly the class

BEST COPY AVAILABLE

was performing. They preferred to be recognized for poor performance rather than falsely rewarded for it. This attitude seemed especially prevalent among engineering and natural/physical science students.

> *I was not so disgusted with the professor, but with the style of testing that was absurd. Why would you study a difficult course for hours and not even understand the language of the test? Even further when you go to look at your score you realize that you got about a 50%, but yet with the curve you got a high "B." (Social Welfare student)*

> *The teacher was insanely boring and I believe to this day, he does not know how to teach appropriately. Everyone slept in his class and he was hard to follow. His tests were ridiculous because they had nothing to do with his lecture. (Education student)*

> *The exams were not a fair representation of what we learned...most of the questions and problems were over the material that was not stressed in the class... very often we would leave the test and try and figure out where the questions came from... the curve on the tests were huge....something is definitely wrong with the class when the average score is failing. (Natural/Physical Science student)*

> *This format [essay test] requires that the student know the material. In most of my other courses, the exams were usually multiple choice. And in each one those courses I have felt that I did not learn anything. (Natural/Physical Science student)*

> *...the average score on most of the tests were around 50%, so the exams had huge curves, but I think that if the average student is learning 50% of the material, this should tell the instructor that they are not properly teaching the materials. (Engineering student)*

> *The teacher taught very poorly and could not handle such a large class. The tests, being multiple choice, did not adequately test our knowledge. Most students did extremely poorly in the class and to cover it up, tests were curved and also the final grades were highly boosted. (Engineering student)*

Category Two: Development of Professional Knowledge and Skills

Comments within the category "Development of Professional Knowledge and Skills" emphasize the importance of developing skills and acquiring knowledge that will be directly useful in the students' careers. The predominant theme within this category is the importance of classes students felt were directly linked to their future career or profession. For these students, the measure of a good class was its practical relevance and applicability to job prospects. As one might expect, students from the professional schools – business, education, engineering,

architectural engineering, and journalism – dominate this theme. Several education students advocated the addition of even more practically oriented classes to their degree program

> *I had actual business meetings with my client and was given a raw idea and asked to perfect it. I had to develop a lengthy presentation to give to my client, something I will undoubtedly do in my future career. This class and the lessons I have learned have prepared me for what my future holds. (Business student)*
>
> *I discovered the importance of keeping up with what it going on in the business world through reading newspapers and watching the news. Thus, I feel confidant that when I start work for an accounting firm as an auditor this summer that I will have a solid knowledge base about a variety of industries. (Business student)*
>
> *All the information given in class is very practical and useful without useless memorization. (Architectural Engineering student)*
>
> *The third class that I feel will probably impact me the most is of the Computer Networks class that I am currently taking. The main reason for the impact is do to my primary career interest which fall right along these lines. (Engineering student)*
>
> *The reason it had such a big impact on me is because it prepared me for the type of work that I will actually be doing in the field. (Engineering student)*
>
> *This class will have a tremendous impact on my future. It is the most practical class I have taken and comes the closest to teaching me what I need to do when I become a teacher. (Education student)*
>
> *I wish there were more classes that deal with my specific field. (Education student)*
>
> *The experience I gained in this class was invaluable. I saw, up close, how a magazine ran and was able to participate in daily operations (make headlines, edit stories, etc.) It helped us with what we'd have to expect when we get jobs...(Journalism student)*
>
> *This class was great in teaching me the literature, references, and lingo in the advertising world. It gave me a better understanding of the advertising process. I definitely foresee the continued use of this information in whatever field of advertising I go into. This information will play a vital role in my future. (Journalism student)*
>
> *The reason these classes appealed to me and had the biggest impact is because they all taught me something real and applicable to things I'll be doing. (Journalism student)*

An interesting twist to the comments from education students was that they often used their university classroom experiences to gather examples and skills for their future teaching careers.

> *I will definitely use the material I learned in this class when I teach. The GTA used many resources that enhanced my learning, and I intend to do that for my students. (Education student)*

I was taught what I need to know as a teacher, while being taught how the material should be taught to the appropriate age groups. (Education student)

This class will have an everyday influence on me and my classroom. When I teach I will be implementing all of the skills I have and will be learning. A well-managed classroom is one of my ideas to a successful classroom. The skill learned in classroom management and discipline can help me achieve that. (Education student)

The format of this class was very practical and was a fantastic model of how to run a high school classroom. We sampled a wide variety of literature for young adults and then practiced different ways of getting students involved in the learning process. (Education student)

Pharmacy, social sciences, social welfare, and natural/physical science students also discussed how particular classes would affect them in their careers – both in the workplace and in graduate school. Fine arts and humanities students made noticeably fewer "applied learning" comments and wrote more of how classes added to their general "life" knowledge and expanded their view of the world.

I felt my experience at KU has been a fairly tolerable one, academically speaking. The most I have learned had come from my pharmacy classes, naturally. (Pharmacy student)

Pharmacotherapy will also help me with my career as a pharmacist. This class really conveys material relevant to my career and was also easy to understand. (Pharmacy student)

I enrolled in this course to make myself more marketable when I enter the job market. I now feel more confident discussing computers and I am constantly discovering the importance and benefit of knowing how to use a computer for more than just word processing. (Social Sciences student)

It is the classes that have had the most impact on me, that I carry the material learned and the skills learned and apply them directly to my career. (Fine Arts student)

In the future this class will help me be more aware of and sensitive to my clients' sexuality and the impact it has on their lives. Already I am able to apply and relate what I have learned to women clients at my student practicum at Women's Recovery Center. (Social Welfare student)

This class provided me with a basic social work foundation by presenting the beliefs, values, and core elements of the profession as well as how the profession "works" in our society. Without studying this fundamental information, I would have been lost in all my later social work courses. The specific information I learned in this course will allow me to be a competent and compassionate social worker. (Social Welfare student)

This class will definitely influence my future as I plan to apply to podiatry school. (Natural/Physical Science student)

In the future, my knowledge of computers will help me in any profession. The world and job market demand computer literacy. (Humanities student)

I have been accepted into a program from Respiratory Therapy and therefore must understand human anatomy and physiology. This lab course will provide me with the background I need to grasp more complex concepts whether I am studying or practicing Respiratory Therapy. (Humanities student)

This will influence my life in the future because I am going to be studying law in the fall of 1999, I will have a better understanding of where our country came from culturally and why the laws were written the way they were. (Humanities student)

Architecture and some architectural engineering students also spoke of how certain classes would influence their professional careers, but the comments were often couched in terms of how classes would help them to discover and to develop "a professional identity" or to "find our own architectural voice." In reading the essays written by the architecture students, it was often difficult to distinguish between "acquiring professional skills" and "acquiring broader life knowledge/perspectives." Particular courses seemed to affect both their view of architecture and the world.

The theories I learned about in this class greatly effected the way I think about architecture and life in general and really provoked me to think critically about what I was learning. (Architecture student)

Perhaps surprisingly, the notion of the artistic discovery of professional self was not found in the selection of essays from fine arts students, except the instance of one design student. However, it should be noted that the fine arts school includes music, art, music education, dance, and design students; the absence of this theme could be an artifact of the particular sample of fine arts students.

The information I learned in this class is necessary for me to become an intelligent architect. He has a passion for architecture that makes one hunger to create spaces that have the same effect on people. (Architecture student)

The experience with the camera and printmaking has affected my work very profoundly. I saw a great change in my architecture after this class because I had learned how to look at the intricacies of buildings. (Architecture student)

BEST COPY AVAILABLE

> *...giving students just enough information and skills to think into the subject, but leaving them to ultimately figure out on their own what architecture really means to them. I left the class thinking like an architect. (Architectural Engineering student)*

Application/Integration Opportunities

A smaller theme within this category is the important effect of classes that give students the opportunity to apply the theories and skills they have learned or to integrate the knowledge acquired over several classes into a coherent whole. The opportunity to integrate or apply information appeared to be especially important for pharmacy, natural/physical science, engineering, architecture engineering, and business students.

> *The Therapeutics course finally brought everything I had been taught so far together. (Pharmacy student)*

> *After taking so many biology courses it was finally great to learn how systems of the body really work. It wasn't so focused on memorizing like anatomy or on such a microscopic level as microbiology or even biology 104. It was the class that I finally go to learn the "big picture" of what is really going on inside the body. (Natural/Physical Science student)*

> *Probably the most challenging but rewarding class I took was CPE613 ... this was where all the knowledge from various chemical engineering courses is brought together in one class. (Engineering student)*

> *I did learn how to apply all the mathematical and theoretical stuff I learned in the previous six semesters. The thing about the school of Engineering is that you learn everything very slowly. For the first three years you don't understand how you are going to apply what you have learned. But, all of the sudden in your senior year it is all put together. (Engineering student)*

> *I actually had to use my knowledge in practical applications and think in different ways. This class will influence me in the future because of the practical knowledge that I gained as well as the real-world skills that I learned. (Business student)*

> *Both [classes] provided me the real world experience and presented me the latest technology that's available out there. (Architectural Engineering student)*

> *...provide a much needed link between [science] classes. With the help of three excellent and very personable instructors, light was poured on three years of memorization. Finally the sciences I had learned were incorporated into something I could actually touch, see, and smell. (Natural/Physical Science student)*

Again, architecture and several architectural engineering students approached the subject of integration of knowledge a bit differently. They spoke of the interconnections among

architecture and areas/subjects such as people, art, photography, the environment, society, and history; and the importance of these connections for their future as architects.

> *I also found that the material I was learning was applicable to other classes. I can make links between different classes both in and out of my discipline and gain a better understanding of the bigger picture. (Architecture Engineering student)*

> *The impact is that it broadened my appreciation of art as well as made me realize the strong ties between art and architecture. I have realized that in the future I would like to do both –I would like to open a design studio that also has an art gallery in front for displaying art, installation art, and furniture art. (Architecture student)*

> *Landscape Design had an impact on me by showing me another side to architecture. It is not just a building that you set on a flat site. There should be an interaction between nature and the building and this moment should be celebrated. (Architecture student)*

> *I think that I will continue to draw from several creative genres to influence my architecture and consequently, I also believe architecture will have a more profound influence on the rest of my life. (Architecture student)*

Category Three: Development of Knowledge and Skills for Life

In contrast to the previous category's emphasis on the value of career-oriented and applied class work, the category, "Development of Knowledge and Skills for Life," reflects a broader, more liberal approach to learning. The courses described within this category provided students with a broad base of transferable skills, revealed hidden assumptions, presented new and challenging perspectives, and created a desire for life-long learning. Themes that emerged included development of broad life skills, the discovery of new interests, and a broader view of the world. Overall, the number of comments that fell into this category was noticeably greater than the number of comments in the second category, "Development of Professional Skills and Knowledge."

The academic units most prominently represented in this category were architecture, humanities, social sciences, and social welfare. Unexpectedly, the proportion of comments from journalism and business students that fell into this category was almost identical to the proportion of comments in the professional skills category. Upon further examination, it became evident that the journalism and business student comments were subtly different from the comments made by the humanities, social sciences, and social welfare students. While the humanities, social science, and social welfare students discussed the benefits of more open communication

with diverse groups, increased critical thinking skills, and more knowledgeable appreciation of the arts, the journalism and business students provided a more pragmatic view citing the value of better writing and oral communication skills, acquirement knowledge of basic investment strategies, learning to work in teams, and gaining greater insight into how people interact in organizations.

> ***Organizational Behavior has given me the tools to better understand people. As employers continue to invest in the idea of synergy and working in groups, this knowledge is invaluable. (Journalism student)***

> ***This class gave me something I can use for the rest of my life because I know I will be investing for my retirement, my kid's future and for financial security. (Business student)***

> ***[the] class taught me about art, its history and how to critically analyze it. I now have a greater appreciation of art and its role in society. I enjoy going to museums and being educated about what I see. (Social Sciences student)***

> ***Another skill this class helped me to develop is related to communicating with others – getting past the generalized, vague comments that people make concerning social issues and discovering what is really being said by questioning and probing them for specifics. (Social Welfare student)***

Architecture students, although usually classified as professional students, often expressed views that were more similar to the humanities, social sciences, and social welfare students than other professional students from business and journalism.

> ***It did succeed in creating new perspectives of architecture and its possibilities. I have been able to search for answers in architecture through a variety of other exercises such as life drawing and furniture design. (Architecture student)***

> ***This class is currently helping me to realize that pro building is not the answer. I have found that I have a deep appreciation for the environment and land use in general. …it is important that both as an architect and as a citizen that I work with the politics of the area until they realize that sustainability can be achieved and that it isn't just another environmental buzzword. (Architecture student)***

Life Skills Development

A theme within this category was the effect of classes that students believed provided them with information that could be utilized in many aspects of the their lives – both professional and personal. Comment topics varied from greater knowledge in a particular subject: "a chance to expand my background in literature," to business acumen: "basic skills … if I ever should

own my own business," to personal wellness: "understanding how to take care of myself" to group dynamics: "how to organize and work with a large group." As true for the overall category, social sciences, social welfare, humanities, business, and journalism students had the largest number of comments within this theme.

> *This class has influenced my ability to communicate more directly and openly in all relationships. It made me aware of the dynamics of communication and the different styles to use with different relationships. (Social Welfare student)*
>
> *I had never been to many plays or musicals and I was surprised to find I really enjoyed the university productions. I think I took away a greater appreciation for the arts by taking that class (Pharmacy student)*
>
> *I also still remember how to sort out my thoughts effectively on paper using brainstorming, bubble diagrams, or any other of the methods that were taught to me. Most importantly though, I now know how to speak in front of people with confidence and assurance. (Architecture student)*
>
> *Art history influenced me to broaden my knowledge beyond the parameters of my degree. Without this exposure to other subjects, I would not have received a well-rounded education at the University of Kansas. The class has a profound impact on my education and it will continue to influence my future by helping me recognize the importance of broadening my education (Natural/Physical Science student)*
>
> *I learned that it was more important to be able to translate what it was I was doing, and the thought and ideas involved, than the actual answer wrought from the process. (Engineering student)*
>
> *Organizational Behavior... was very insightful and helped us to better deal with people situations in the business world. It had a very big impact on my time as a student at KU. It helped me become more sociable with people. (Journalism student)*
>
> *Most importantly, [the instructor] taught us the fundamentals of communication – how to communicate our ideas and apply them to other philosophical/political views. The students become much more willing to discuss and thus form new ideas about various topics. (Fine Arts student)*
>
> *This course will influence me in the future because it had taught me that making judgments about a person is not right and that the judgments made are wrong the majority of the time. It has also taught me how to listen to others and not interrupt them. (Social Science student)*
>
> *This course gave me a new appreciation for works of art. I no longer judge a work merely on the basics of whether or not it is "pretty." I gained a deeper understanding of the artist's motivation for the work as well as the social implication of the work. I now have a new sense of joy when walking through a museum. (Humanities student)*

BEST COPY AVAILABLE

> *I have since decided not to apply to med school, but I will continue to employ the concepts learned in this course through the rest of my life. I took from this course, the ability to pay close attention to detail that I gained in learning the many intricate aspects included in this area of science. (Education student)*
>
> *This class is one that applies to every day life, and every day business issues. This class is one that teaches you how to think. (Business student)*
>
> *Quite simply, it made me think. (Humanities student)*

Again, the pragmatic approach of the business students stands in contrast to the broader perspective of the humanities students. For instance, communication skills were discussed within the context of job situations for business students, while humanities students were more likely to write about improving communication skills in the context of both their personal and professional lives.

> *...my writing improved to a level of high quality. This class is invaluable for my future. I constantly write papers for classes, letters to family members, and will utilize my writing skills for the rest of my life. (Humanities student)*
>
> *Communication is essential to everyone's future, especially in the area of business. (Business student)*
>
> *This class basically included a lot of class participation, group work, and presentations. This class made me become more involved in a group setting as well as improve my communication skills. This class taught me a lot of things companies look for in employees. (Business student)*

Expanded Perspectives.

A second theme within this category is the concept of expanded perspectives. These courses challenged and awakened students to consider new perspectives about the outside world and to discover new abilities within themselves. A different way of looking at the world was instigated by unfamiliar subject matter, provocative new perspectives, challenging instructors, or new experiences. Comments such as "eye-opening" and "different ways of thinking" are common. Often the courses were outside the student's major and involved both new material and alternative ways of thinking. However, some classes covered familiar material in a way that was unexpected or using a perspective that caused students to re-evaluate their current beliefs. Architecture, humanities, journalism, social sciences, and social welfare students made up the largest proportion of comments within this theme.

Since this class I have tried to come up with my own theory on ethics. It has made me more open to other value systems: ... (Architecture Student)

This class taught me the importance of looking at an issue from all different sides and that what may be right in one situation may not be appropriate for another. Ethics showed me that there is often more that one right answer to a problem and sometimes there isn't an answer at all. (Social Sciences student)

This course has greatly expanded my knowledge of World history and has made me realize how unaware I am of the struggles of people outside the western hemisphere. ...this course will influence my future life in the sense that it will push me to become more on an advocate for struggles in which I believe, and more conscious of current events outside of the US. (Social Sciences student)

Every individual enrolled in the class had a pre-formed opinion on the topics that were taught in class so there were good discussions and debates which really forced individuals to reevaluate their perceptions. (Natural/Physical Science student)

My instructor taught me to look past the literal and look further into the meaning of the poem. She helped me to see that although I have an extremely concrete way of thinking, I can think abstractly and see deeper meaning in things which I never believed there was a deeper meaning. (Social Welfare student)

In the future, this will be helpful as I am now much more open to different ideologies and thus can ultimately become a better educated individual than those who have never questioned their basic way of thinking. (Fine Arts student)

...helped break down some stereotypes that I had of people in general. It introduced me to different cultures, governments and ideas. (Journalism student)

This class had an impact on me because it was so different ... I had never thought of analyzing a story like this, but it is very helpful. I believe it has impacted my life because I have been taught another way to break down the big picture and look at things more clearly. (Journalism student)

The most critical quality of this course was the way that it literally transformed my way of viewing, not only other cultures, but my own. It helped me to become a more open-minded individual by learning to appreciate my heritage and learning to respect others' by becoming familiar with them. (Education student)

The greatest impact that this class had on me was that I was given the chance to hear different angles on current topics from many informed people – I learned to listen to others' views and learn from them, even though in most cases I felt that I had already formed an educated opinion. I hope that this lesson is one that I will carry with me in all of my future endeavors. Listening and learning from others' knowledge and experiences is probably the biggest learning tool that I have gained at KU. (Engineering student)

Interest in Subject Matter

The third and smallest theme within this category includes courses that were selected because of high levels of interest in the subject matter. Many are courses outside the student's major or electives, but some are major classes that sparked an intense desire within students to learn and to understand more fully. Overwhelmingly, more humanities student comments fell within this theme than any other group. Interestingly, pharmacy and education students also had a significant number of comments, with the other disciplines offering only a smattering of comments within this theme.

> *While I was taking this class I think my friends got tired of me telling them about all the interesting things I learned in it. I talked about it so much. It made me love sitting and thinking about the ocean even more than I already did. (Humanities student)*

> *But Experimental Film & Video introduced me to a whole new world of films that I didn't even know existed. Weird, weird movies and I have very weird taste so I loved them. I was very much influenced my surrealism, minimalism, and especially dadaism. I would love to make these kinds of films as a career. (Humanities student)*

> *Each semester, I found authors whose works were very interesting. Following the conclusion of my second semester of western civilization, I continued to read and study philosophy in my spare time.... I also found the history in the course was extremely interesting. Learning about people such as Nietzsche, Descartes, and Seneca, among others, was fascinating. (Humanities student)*

> *It was undoubtedly the most interesting and thought-stimulating that I have taken thus far. I felt like it was a culmination of the things that I had started to develop and explore in my high school senior English class. (Pharmacy student)*

> *Chemistry is just interesting. (Pharmacy student)*

> *The lab was so interesting and hands on. I always was excited to go to class, and I wanted to learn. Moving from lab to lab my interest only got greater. This lab really made me think and wonder about the body of humans as well as animals, and how each body functioned and why. (Education student)*

> *I have a passion for public speaking, and I saw that there are people out there that do not. This was another class I looked forward to attending everyday. Maybe it's because I love the spotlight or because I love being good at something that many people struggle with. (Education student)*

> *The class doubled my interest in the subject matter and renewed my drive to learn. [the instructor] showed me that I shouldn't abandon the things that interest me (like Latin American History) just because they may not be "useful" per se. (Journalism student)*

Category Four: Discovery of Self/New Ways of Thinking about Self

Few would refute that one of the missions of higher education is to allow students to grow as individuals. Higher education is supposed to provide safe opportunities for students to examine their own beliefs, discover new things about themselves, and perhaps come away from the experience with a stronger self-image. For many students, these were the types of experiences they had in the courses about which they chose to write. As with other themes, some of the differences in definition of "Discovery of Self" break down by major.

Discovery of Beliefs/Values

This theme under "Discovery of Self" encompasses students who either found beliefs and values strengthened that they already espoused or discovered entirely new things about themselves. For many students, these revelations were very emotional, and the "lessons" they learned from this course extended far beyond the actual course material. While all of the majors had some representation, the fewest number of responses in this sub-theme were in the Professional Schools.

> *The class was empowering in that it helped me figure out what I believe and encouraged me to be an active citizen by voting for politicians who have the goals that I believe in. (Journalism student)*

> *This class . . . has helped me open up, not only to other people, but to teachers and people I look up to as well. The class learns the value of honesty and how we should act not only in organizations, but in relationships, family, etc. (Journalism student)*

> *This class has helped me understand and appreciate this diversity. It has also helped me understand myself and my background and culture. (Social Sciences student)*

> *This class opened my eyes to many things including the uneven distribution of resources in this world. I believe it further solidified my beliefs about wanting to advocate for women, minorities and poor people. (Social Sciences student)*

> *It had a tremendous effect on my growing as a woman and becoming aware of many issues. Coming to college and leaving home allowed me to grow and become more in touch with who I am and this course aided in my experience. (Social Sciences student)*

> *Since this class I have tried to come up with my own theory on ethics. Trying to do this has made me more fully realize what it is I value in life. (Humanities student)*

In the future, this will be helpful as I am now much more open to different ideologies and thus can ultimately become a better educated individual than those who have never questioned their basic way of thinking. (Fine Arts student)

I found a piece of myself that I did not even know was missing. I found an inner courage and compassion that had never been allowed to see the light of day. (Architecture student)

This class will probably have the most subtle influence in my future. It has taught me to be more introspective and to reject immediate judgments in favor of deeper and more thorough searches. (Education student)

This soul searching taught me things about myself that I didn't know, and helped me understand the kind of person I am. I learned that I needed to be passionate about something in order for me to work on it . . . . I learned to think and see things in a new light, that everything has meaning, and that nothing is ever truly finished. (Architectural Engineering student)

Self-Empowerment

These comments are from students who, through classes that influenced them, gained self-confidence or a stronger sense of their self-worth. For some students, this self-empowerment came through gaining a skill such as public speaking. Other students gained a respect for their own thoughts and opinions. Students in all majors felt the impact of courses where they gained in self-empowerment. Students in Professional Schools often spoke highly of classes that taught them to be vocationally self-confident and to persevere. The other majors learned personal lessons that were often more abstract.

The biggest impact it has had is instilling a strong sense of confidence in myself. (Journalism student)

My senior design class let me know that the motivation and preparation required was something that I hadn't lost. . . . [I]t also gave me the confidence to challenge and control my future. (Engineering student)

This class has given me courage to speak in some of my other classes because it made me realize that I had good things to say. (Social Welfare student)

[this class] taught me a valuable lesson. . . Though I don't actually remember much about [this class], I learned something much more important--perseverance. (Pharmacy student)

I learned that I should not let myself be controlled by a fear of failing. (Social Science student)

I have been taught another way to break down the big picture and look at things more clearly. (Journalism student)

This course material will not influence my life, but the determination and dedication with which I "conquered" the class made me realize that there are many obstacles in life which can be overcome. (Engineering student)

I also had to check my ego at the door in order to take unaccustomed criticism. . . . This is one of the first classes where I have really have to work hard in order to improve myself. I have enjoyed the challenge immensely. (Engineering student)

I felt honored [in this class] as a Mexican-American, and also as a woman. . . . The course will influence my future life because I learned how to broaden my thinking and to guard against faulty assumptions. (Social Welfare student)

I have a better understanding of how I behave and whether it is purposeful or self-defeating. (Journalism student)

My study abroad experience also taught me a lot about myself. I have a greater understanding of who I am as a person. (Social Science student)

It has been several semester since a class has made me just want to sit and think about things to figure out what I personally believe. It makes me feel like the idealistic social crusader I wanted to be in high school. (Humanities student)

It was the first time I had been around a woman designer. Being a woman myself, it really helped me realize my design style and that I don't design like everyone else. I finally understood what I was supposed to all along. (Architecture student)

[This course] gave me the confidences to continue exploring new and challenging ideas. It also gave me the confidence to challenge and question other ideas that I may have accepted as truth in the past. (Architecture student)

Under [this instructor's] teaching I found a creativity and way of thinking that I believe I always had, but didn't know how of where to find it. (Architectural Engineering student)

Taking this class was somewhat of a self-esteem booster for me. Being African-American on a predominately white campus can be intimidating at times. At the time I was in dire need to take a class where I was not the only minority. This class was a refuge to me. (Business student)

He brought me out of my shell and gave me a sense of confidence that I haven't had before. (Business student)

A More Balanced Self

Students report that some of the courses they took, particularly those outside the major, encouraged a better-rounded intellect. Comments about courses that fostered a more balanced self spanned the majors, as students from all the disciplines appreciated the opportunity to grow intellectually.

> *I recommend this opportunity [teaching] to everyone, you will be surprised with all that you will have learned about yourself and your subject. (Natural/Physical Science student)*
>
> *I believe that this class had a big impact on helping me develop a well rounded intellect. More importantly, it will continue to influence my future life because it changed the way I think. I consider more ideas when I view the world. (Engineering student)*
>
> *I was impacted in the sense that I have a greater desire to read literature, a greater passion for written words. (Engineering student)*
>
> *It made me feel intellectual. . . . I feel that I am a well-rounded individual and this class helped. (Journalism student)*
>
> *I now have a new sense of joy when walking through a museum. It is a joy that comes from knowing what the contents of the art mean, as opposed to what it looks like. (Humanities student)*
>
> *I have found the discussion of the great works to be both invigorating and inspirational. To understand what the author was thinking when he wrote his great work is great. (Humanities student)*
>
> *[I]t was the first class I have ever taken that kept me thinking far after the class had ended. . . . The class helped me to mature as a person and consider a lot more variables when making decisions. . . . I feel like [this class] made me grow as a person more than any other class. (Business student)*
>
> *[This class] made me evaluate closely what obstacles I can and can not overcome. . . . I take with me not the [course knowledge] but the ability to recognize and accept my own limitations. (Business student)*

Discovery of Professional Self

The Professional School students in particular wrote about courses that proved to be the catalyst for their career choices and many student recalled the course that reinforced their choice of major. Conversely, students in all disciplines also recalled the course that caused them to change their choice of major. This theme is closely aligned with the notion of developing a professional identity that was discussed within the category of Developing Professional Skills and Knowledge. Forming a professional sense of self was important for students from

architecture, education, engineering, business, and journalism. As mentioned in that section, it was especially difficult to differentiate between categories for architecture students as the development of their professional identity appeared to be closely linked with a better understanding of self.

> *This class taught me everything I know about copy editing and made me want to pursue a career as a copy editor. (Journalism student)*
>
> *His class has made me aware of what I want to do with my life. It has confirmed that I want to work in the non-profit sector and make a difference in people's lives. (Social Science student)*
>
> *The issues discussed in the class grabbed my attention. The led me to take more sociology courses and I eventually declared it as my major. (Social Science student)*
>
> *These courses gave me the confidence that I can practice engineering. (Engineering student)*
>
> *The class helped me realize that my talents are in Engineering, and I am much happier in the Mechanical Engineering department. (Engineering student)*
>
> *In this class I realized what I truly enjoy, and I hope to make geology a permanent part of my life. (Engineering student)*
>
> *. . . Chemistry helped reaffirm the fact that I wanted to be a pharmacist. . . . By looking at my career path of pharmacy, I would have to say that this class impacted my life the most. (Pharmacy student)*
>
> *I now realize that the opportunity to experience a small part of the world of zoology was integral in my decision to pursue pharmacy. (Pharmacy Student)*
>
> *While the class was a skim over so much, it attracted my attention wholly. There were so many topics that I wanted to learn more about. So Environmental Studies has become my major. (Natural/Physical Sciences student)*
>
> *[This course] was the class that made me change my major. I really liked the professor, but I realized that community health was not the road for me. I decided that I wanted to teach, but in a classroom. (Education student)*
>
> *I enjoyed this class so much that it make me think about becoming a teacher and putting myself in a public school setting. (Education student)*
>
> *This course really helped me decide that I wanted to work with the elderly after I graduate. (Social Welfare student)*
>
> *[H]er courses really helped me determine what I want to do with my life after I graduate from college. (Humanities student)*

> *[A]s a result I am considering pursuing this newfound passion as part of what I do for the rest of my life. (Architecture student)*
>
> *Maybe it was due to the professor, or maybe it was due to the class, nevertheless, this was a class that helped me choose I career path in life. (Business student)*
>
> *[This course] was the course that taught me that I did not want to be an architect. . . . This course made me listen to the little voice in the back of my head saying that this was not what I wanted to do when I graduate. (Architectural Engineering student)*
>
> *[I]t was a smart move on my account. I was able to cross off a career option off my list of considerations. (Humanities student)*

Discussion & Implications

In a comprehensive literature review of student views on general education, Johnston, Jr. et al. concluded,

> Colleges and universities need the capacity to respond more comprehensively and constructively to the perceptions students bring with them to our programs – reinforcing their accurate and productive perceptions and addressing their areas of ignorance and misunderstandings. To do that, however, they need to know far more about what those perceptions and misperceptions are. (Johnston, Jr. et al, 1991, as cited in Twombly, 1992, p. 243)

By presenting a fascinating snapshot into how students view their undergraduate education at one university, this study is one attempt to provide the information that Johnston found lacking. Many of the reasons students cited regarding classes with an impact on their lives fit nicely with commonly held views of teaching and learning. For instance, some students felt that good teaching was the key, others favored engaging subject matter, some preferred practical career preparation, and still others valued gaining a broader worldview.

However, the essays also appear to challenge some of the prevailing notions about teaching and learning. For example, there were noticeably more comments citing increases in general life knowledge and skills than comments about acquiring professional knowledge and skills. This distribution appears to be in contrast with some of the widespread research on both curricular issues (Stark & Lattuca, 1997) and college students (Horowitz, 1987; Astin, 1997), which indicates that students are increasingly vocationally oriented. Our study shows that students were profoundly affected by courses that taught them to value their culture and their history, their literature and their art, as well as by courses that taught them the practical aspects of

a chosen profession. In *Campus Life*, Helen Lefkowitz Horowitz (1987) gives the following grim description of today's college students:

> When undergraduates perceive college as mere preparation for professional school, they hold themselves in. They push themselves to make high grades and present an unblemished portrait before an admissions committee. This means that they do not let themselves explore their inner selves or their world. How can they afford the luxury of contemplation when they are accumulating the grade point average necessary for application forms? (p.272)

This portrayal of a "typical" undergraduate is in direct contrast with many of the findings in our study. We found many undergraduates who appreciated the opportunity to explore their inner selves and their world. Students were grateful for the opportunity to learn more about their positions on critical issues, to explore other countries and other cultures, to discover a more intellectual self. Make no mistake – many students do attend college strictly to learn the skills for a chosen profession. But a significant number of students still value the college experience as an opportunity to learn more about themselves and the world in which they live.

The student essays provided additional insight into how general education classes and professional education classes work together in developing not only career specific skills, but also broad life skills, expanded perspectives, and self-awareness. Students praised their major classes for improving their ability to speak, write, and read. Students believed that major classes provided them with a better understanding of the role of technology, an enhanced capacity for critical and innovative thinking, an appreciation for ethical dimensions of human behavior, and an appreciation for the arts. Of course, as many of the students themselves pointed out, taking all major classes can limit a student to a narrow view of the world. However, the student comments underscore the idea that general education and major classes often work together in helping a student to achieve broad and well-rounded education.

One unexpected outcome of this study is that it has forced the researchers to re-examine some commonly held perceptions of students, particularly those relating to discipline. For example, the term "Professional School" is used at this institution to refer to everything not under the large umbrella of the College of Liberal Arts and Sciences. It is not unusual for administrators and educators alike to talk about "the Professional Schools" as if the students in these disciplines all behave in a similar fashion. However, this study shows that there are more differences than similarities between many of the Professional Schools. The Schools of

Engineering, Business and Pharmacy probably come the closest to meeting the implied definition of "Professional School," in that these students are very career-driven and tend to expect concrete, useful information from the courses they take. Other schools commonly referred to as Professional Schools, such as Social Welfare and Education, have far more in common with departments in the Social Sciences and Humanities than they do with their fellow Professional Schools. Students from these schools were often more influenced by classes that allowed for personal growth and an expanded perception of the world.

The group of students that most convincingly broke the stereotype of the "professional students" was the Architecture students. The students spoke of acquiring professional skills and knowledge, not through practical, no-nonsense applications, but through a more introspective, artistic discovery of architectural identity and voice. The students seemed to be able to see and understand connections between their chosen profession and the world around them in a way that no other "professional students" were able to do. Instead, only students from the Humanities seemed to express some notion of this broad sense of connectedness. Given the artistic-type development process, the lack of parallels between Architecture students and students from Fine Arts was somewhat perplexing. However, the absence of similarities may be another example of the dangers of aggregating diverse disciplines under one title, in this case "Fine Arts." Perhaps a closer examination of the views of design, painting, or sculpting majors might yield additional insight.

Many of the student essays also challenged the notion that students expect high grades for a minimal amount of effort (Sacks, 1996). In *Generation X Goes to College*, Sacks describes the cycle of grade inflation, "students demand it, administrators seem to encourage it, and teachers who try to maintain rigorous grading standards expose themselves to ruinous student evaluations, dwindling class sizes, and possible loss of a job" (p. 167). However, the students in this study expressed disgust with large curves, grades that were meaningless, and tests that did not properly evaluate what students' should have learned. They criticized teachers who did not have high expectations of students and did not challenge them to meet higher standards. These "student consumers," as Sacks describes them, expected to "get what they had paid for," not in terms of high grades, but in acquired knowledge. Of course, students will always care about grades, but this finding belies the stereotype that students value high grades at the expense of learning. One

caution should be noted – the large majority of these students were in the last semester of their senior year, reflecting back on the totality of their coursework. As one reviewer noted, these "college survivors" may be more comfortable claiming they wish they hadn't been graded on a curve, than students still in the throes of completing course requirements.

Future Research Opportunities

The rich data provided by the student essays written as part of the general education assessment at one research institution lend themselves to analysis from multiple frameworks. While the analysis provided in this paper placed the data within the context of student opinion and educational assessment, other frameworks may provide additional insight. For example, using the literature on student development, one might look for patterns or trends within the essays that provide information on the developmental stage of the students when they perceived the impact of certain courses. Were those students still functioning within the dualism identified by Perry (Perry, 1997)? Did certain courses facilitate student readiness to make a life long commitment to a career or within a relationship? The emphasis of the analysis would shift from what courses had an effect on students to how did the students demonstrate their development through their interpretation of their experiences or their selection of courses that were important to them.

Although our research includes general observations about the commonalties and differences among students in the various disciplines, additional analysis could also include more quantitative comparisons within and between groups. For example, the student comments in schools such as business, engineering, education, journalism, pharmacy, and social welfare might be more finely examined for different/similar perspectives on the contribution of college coursework to their professional future. Comments from the fine arts, humanities, and social sciences might be analyzed for their degree of openness to diversity and new perspectives. Majors who require an extensive science and mathematical background, such as pharmacy or chemical engineering, might be grouped with the natural/physical science majors to determine the relative importance of integration and laboratory experiences. However, as our analysis revealed, unexpected similarities and differences may emerge – i.e. comments from architecture and humanities students may be more alike than those from engineering and architecture.

Because of the secondary nature of the data, this project necessarily has focused on one major research institution; however, expanding this type of research on student perceptions of the effect of courses could be expanded to include other institutional types. In that way the robustness of the categories could be examined across institutions. Are the trends reported in this study present at other research universities, at comprehensive institutions, at liberal arts colleges? What are the commonalties, the differences? How widespread are these trends?

Conclusions

Almost forty years ago, Dressel and Mayhew concluded that student opinions should be "cultivated into one the strongest and most constructive forces for the development of general education" (as cited in Johnston, et al. 1991, p. 181). Today, Pascarella and Terenzini (1998) assert that to fully understand the impact of college on students, traditional research approaches are no longer adequate. By allowing the students' voices to be heard concerning the effect of college courses, we are hopeful that this study will contribute another piece of knowledge to our understanding of the many complex ways that curriculum can affect students.

References

Angelo, T.A. (1994). Introduction and overview: From classroom assessment to classroom research. In the ASHE Reader Series: *Assessment Program Evaluation*, J.S. Stark & A. Thomas (Eds.). Jossey Bass: San Francisco. 707-714.

Astin, A.W., Gardner, J.N. & Sax, L.J. (1998). *The Changing American College Student: Implications for the Freshman Year and Beyond*. Teleconference produced by National Resource Center for the First Year Experience and Students in Transition. University of South Carolina. April 21, 1998.

Astin, A.W. (1993). *What Matters in College: Four Critical Years Revisited*. Jossey-Bass: San Francisco.

Barr, R.B. & Tagg, J. (1995). From teaching to learning - A new paradigm for undergraduate education. *Change*, 27 (6), 12-25.

Belenky, M.F., et al. (1995). Connected teaching. In ASHE Reader Series: *Revisioning Curriculum in Higher Education*, C.F. Conrad & J.G. Haworth (Eds), Jossey Bass: San Francisco, 469-478.

Berg, B. (1995). *Qualitative Research Methods for the Social Sciences*. 2nd Edition. Allyn & Bacon: Needham Heights, MA.

Bruffee, K.A. (1993). *Collaborative Learning: Higher Education, Interdependence, and the Authority of Knowledge*. John Hopkins Press: Baltimore, MA.

Butler, J.E. (1995). Transforming the curriculum: Teaching about women of color. In ASHE Reader Series: *Revisioning Curriculum in Higher Education*, C.F. Conrad & J.G. Haworth (Eds), Jossey Bass: San Francisco, 435-449.

Carson, B.H. (1996). Thirty years of stories: The professor's place in student memories. *Change*, 28 (6), 11-17.

Cross, K.P. (1981). *Adults as Learners: Increasing Participation & Facilitating Learning*. Jossey-Bass: San Francisco.

Horowitz, H.L. (1987). *Campus Life*. University of Chicago Press. Chicago IL.

Karney, D. (1997). University of Kansas, School of Business, Ned E. Fleming Distinguished Teacher (endowed chair). Personal conversation.

Knowles, M. (1984). *The Adult Learner: A Neglected Species*. 3rd Edition. Gulf Publishing Company: Houston, TX.

Johnston, Jr., J.S. et al. (1991). The demand side of general education: Attending to student attitudes and understandings. *The Journal of General Education*, 40, 180-200.

Maxwell, J.A. (1996). *Qualitative Research Design: An Interactive Approach*. Sage Publications: Thousand Oaks, CA.

Pascarella, E.T. & Terenzini, P.T. (1998). Studying college students in the 21st century: Meeting new challenges. *The Review of Higher Education*, 21 (2), 151-165.

Perry, W.G. (1997). Cognitive and ethical growth: The making of meaning. In *College Student Development and Academic Life*, K Arnold and IC King (Eds), Garland Publishing Inc: New York.

Sacks, P. (1996). *Generation X Goes to College*. Carus Publishing Company: Peru IL.

Schwandt, T.A. (1994). Constructivist, interpretivist approaches to human inquiry. In the

Handbook of Qualitative Research, N.K. Denzin & Y.S. Lincoln (Eds.) Sage Publications: Thousand Oaks, CA, 118-137.

Stark, J.S. & Lattuca, L.R. (1997). *Shaping the College Curriculum: Academic Plans in Action.* Simon & Schuster: Needham Heights MA.

Strauss, A.L. (1987). *Qualitative Analysis for Social Scientists.* Cambridge University Press: New York.

Twombly, S.B. (1992). Student perceptions on general education in a research university: An exploratory study. *The Journal of General Education,* 41, 238-272.

Weiler, K. (1995). Freire and a feminist pedagogy of difference. In ASHE Reader Series: *Revisioning Curriculum in Higher Education,* C.F. Conrad & J.G. Haworth (Eds), Jossey Bass: San Francisco, 295-315.